Work Order ID 61630

August 30, 2010 2:45:39 PM

Item ID: D2792-130

Revision ID:

Item Name: EXTRUSION

Accept

Setup **Start** **Stop**

Start Date: 8/30/10 **Start Qty:** 53.00

Required Date: 9/21/10 **Req'd Qty:** 53.00

Cust Item ID:

Customer:

Reference:

Run **Start** **Stop**

Approvals: **Process Plan:** CL **Date:** 10/8/30 **Tooling:** ______ **Date:** ______

QC: ______ **Date:** ______ **SPC (Y/N):** ______ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Draw Nbr	Revision Nbr
D2792	Rev A1

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Accept Qty / Reject Qty / Insp. Stamp
100 Purchasing Purchasing	PURCHASING	0.00	CL 10/8/30 (53)
	Memo Issue P/O: 12469 □a) Extrude as per Dwg D2792 □b) Material: 6061-T6 (QQ-A-200/8) □c) Tool: MS-19248□d) Material certification is required.□e) 130 is equal to 130.0"	0.00	
110 Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs	0.00	10/9/24 (53)
	Memo Ensure material certification and pull test results attached	0.00	
120 QC Quality Control	QC6- Inspect dimensions to drawing	0.00	(NO)
	Memo Check pull test Report to Dwg D2792 for compliance	0.00	10/09/27

Pulled qty + 16 random + checked 100% to Dwg. 10/09/22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 61630

August 30, 2010 2:45:39 PM

Item ID: D2792-130 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: EXTRUSION

Start Date: 8/30/10 **Start Qty:** 53.00 **Cust Item ID:**

Required Date: 9/21/10 **Req'd Qty:** 53.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location:_____	0.00							
Packaging									
Packaging	**Memo** HALL 007 => HALL 005 =>	0.00	SAD 10-09-28		60				
140	QC21- Final Inspection - Work Order Release	0.00						10/09/28	
QC									
Quality Control	**Memo**	0.00							

mf 10-9-28

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

August 30, 2010 2:45:39 PM

Work Order ID: 61630

Parent Item: D2792-130

Parent Item Name: EXTRUSION

Start Date: 8/30/10 **Required Date:** 9/21/10

Start Qty: 53.00 **Required Qty:** 53.00

Comments: IPP A□98.11.09□New Issue□KS□

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2792-130P EXTRUSION		Purchased	No			100	Each	0.0000	1	53			

PC 10/1/24 (53)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

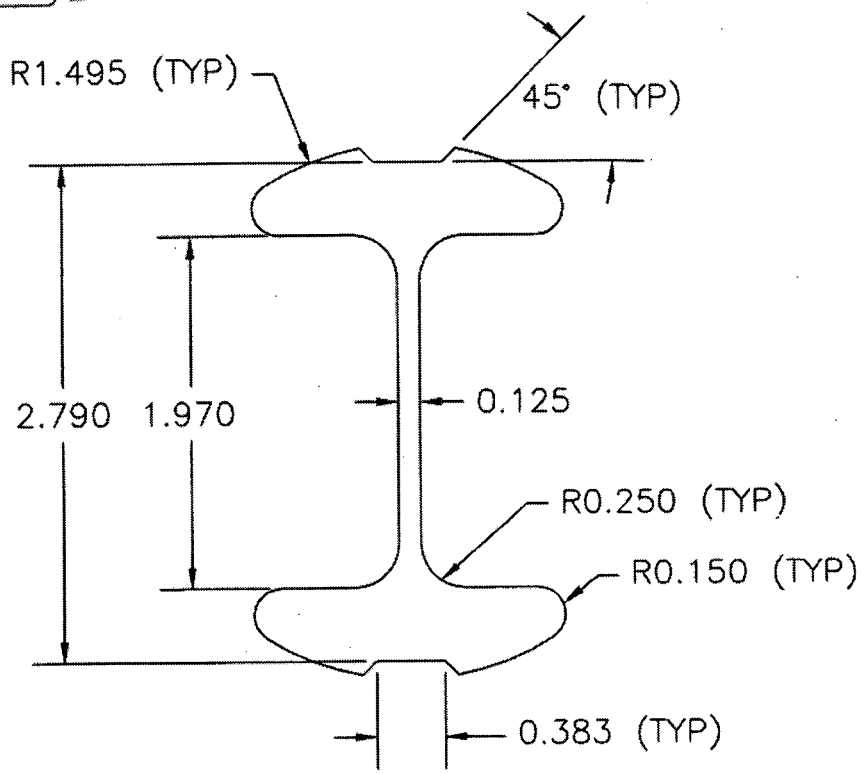
NOTE: Date & initial all entries

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED KE	APPROVED	DRAWING NO. D2792	REV. A SHEET 1 OF 1
DATE 98.08.13		TITLE EXTRUSION	SCALE 1:1

A	98.08.13	NEW ISSUE
A1	01.04.17	ADD NOTE #7

RELEASED
98.08.25 BS



GENERAL NOTES

1. MATERIAL: 6061-T6 (QQ-A-200/8)

   MINIMUM YIELD TENSILE STRENGTH = 35 ksi ✓
   MINIMUM ULTIMATE TENSILE STRENGTH = 40 ksi ✓
   MINIMUM ELONGATION = 8 % ✓

   A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

2. MANUFACTURED USING CARADON INDALEX DIE # MS-19248
3. BREAK ALL SHARP CORNERS 0.010 MAX.
4. NO ID TOOLING MARKS.
5. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS ARE IN INCHES.
7. PART NUMBER IS D2792-XXX WHERE XXX IS CUT LENGTH IN INCHES (EG. D2792-145 IS 145" LONG)

CL 10/8/30
W10: 61630

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO12469

Purchase Order Date 8/30/10
PO Print Date 8/30/10

VC-SAP001

FAXED 8/30

Order From :

SAPA CANADA INC
LOCKBOX B9427
PO BOX 9100
POSTAL STATION F
TORONTO, ONTARIO M4Y 3A5
CANADA

Contact Name		**Buyer**	Chantal Lavoie
Vendor Phone	800 563 5120	**Requisition Nbr**	
Vendor Fax	800 563 8310	**Tax Resale Nbr**	10127-2607
Vendor Account Nbr		**Terms**	Net 30
		Currency	CAD
		FOB	

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference / Revision ID / Vendor Part Number	Description / Mfg ID	Req Date / Taxable	Req Qty / Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2792-130P	EXTRUSION	9/21/10 Yes	53.00 Each	Yours ppd	$42.4583	$2,250.29

Special Inst:
EXTRUDE AS PER DWG D2792 REV. A
B61630
MATERIAL: 6061-T6 AS PER QQ-A-200/8
130" LONG
MINIMUM YIEL TENSILE STRENGTH =
35 KSI
MINIMUM ULTIMATE TENSILE
STRENGTH = 40 KSI
MINIMUM ELONGATION 8%
TOOL # MS-19248
SAMPLE FROM EACH BATCH WILL BE
PULL TESTED TO ASTM
STANDARD B221

PO Total: **$2,250.29**

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

CL

No substitution or deviation without consent.
Certificate of Conformity or Material Certification required when applicable

Change Nbr: 1 **Change Date:** 8/30/10

- PROFILÉS D'ALUMINIUM - ANODISATION - FABRICATION - PEINTURE
ALUMINUM EXTRUSIONS - ANODIZING - FABRICATION - PAINTING

Sapa Canada, Inc.
Adresse Postale 325, rue Avro
Pointe-Claire, Québec H9R 5W3
Téléphone: (514) 697-5120
Télécopieur: (514) 694-8310

sapa

VENDU À / SOLD TO

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ONT

K6A1K7

EXPÉDIÉ / SHIP TO

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ONT

K6A1K7

MEME SAME

INDICATIONS SPÉCIALES
SPECIAL INSTRUCTIONS

P/S#: 156714
NOTRE NUMÉRO DE COMM.
OUR ORDER NO.
82152 1

CERTIFIÉ ISO 9001:2008

N° DU CLIENT / CUST. NO.	TAXE DE VENTE FÉD. / G.S.T.	TAXE DE VENTE PROV. / PROV. SALES TAX	N° DE COMM. DU CLIENT / CUST. ORDER NO.	DATE DE COMMANDE / ORDER DATE	NOTRE DATE DE COMM. / OUR ORDER DATE	CONDITIONS / TERMS
CUSTOMER P.S.T						R857314058 PROJ:

Required Date:

VENDEUR / SALESMAN	PAYÉ / PPD.	PERC / COL.	C.A.D. / C.O.D.	F.A.B. / F.O.B.	EN BALLOTS / BUNDLED AND TAPED	CARTONNÉ / CARTONED	CARTONNÉ & INTERCALÉ / CARTONED & INTERLEAVED
201355 XXX	X			24609	08 / 36		

DATE DE LIVRAISON / DATE SHIPPED	ENVOYÉ PAR / SHIPPED VIA
10/09/23	OTTAWA 24 SEPT.

N° ITEM / ITEM NO.	COMMANDÉ / ORDERED POIDS / WEIGHT	COMMANDÉ / ORDERED PIÈCES / PIECES	N° DE MATRICE SAPA / SAPA DIE NO.	DESCRIPTION DU CLIENT / CUSTOMER DESCRIPTION	ALLIAGE ET TREMPAGE / ALLOY AND TEMPER	LONGUEUR / LENGTH	PRIX UNITAIRE / UNIT PRICE
1	609	53	MS 19248 D2792	F EXTRUDE ONLY DUE=2010/09/24 SE2LAS "I" SUPPORT COMPONENT BUNDLE= 939066	6061 T6	3302	.00

We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association, and requirements of our Quality procedures

CETTE EXPÉDITION / THIS SHIPMENT

BALLOTS / BDLES.	POIDS / WEIGHT	PCES / PCS.	MONTANT / AMOUNT
1	567	60	POIDS EN LBS

FORM 118XF REV 04/10

FEUILLE D'EMPAQUETAGE
PACKING SLIP

LES MARCHANDISES CI-DESSUS ONT ETE REÇUES EN BONNE ET DUE FORME
THE ABOVE GOODS WERE RECEIVED IN GOOD ORDER

325 rue Avro
Pointe-Claire, QC, Canada H9R 5W3
Téléphone (514) 697-5120
Fac-similé (514) 694-8310

sapa

Rapport des propriétés mécaniques
Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**

Adresse / Address : **1270 ABERDEEN STREET**
HAWKESBURY ONT,
K6A 1K7

S 10/09/27

Commande Sapa / Sapa order # : **82152**

Bon de commande / Purchase order # : **12469**

Matrice / Die # : **MS 19248**

Description : **"I"SUPPORT COMPONENT**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part # : **D2792**

Contrôle / Control # : **28001-1**

Coulée / Cast # : **49356**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	44 306
Contrainte élastique Yield stress (psi)	35 000	40 016
% élongation dans 2" % elongation in 2"	8	10
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	94

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 – 0,24	0,48 – 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 – 0,40	0,15 Max	0,80 – 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	—	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre, date : **2010-09-10**
Yours truly,

Gilles Pelletier
Technicien de la qualité
Quality technician